

- 22 -

ABSTRACT

A semiconductor structure including an insulator layer formed of a first polymer. The structure also includes an organic semiconductor layer formed of a second polymer. The polymers self-assemble into a well-ordered co-polymer structure with the
5 semiconductor layer positioned adjacent the insulator layer. The structure may be an organic, thin-film semiconductor device including, without limitation, a transistor, a multi-gate transistor, a thyristor, and the like. Also disclosed is a process of manufacturing the semiconductor structure.